

# PIKES PEAK RADIO AMATEUR ASSOCIATION (PPRAA)



Volume 65 Issue 01

January 2015

## Activities/Meetings

- Ham Breakfast  
Saturday, Jan 3rd., 8-9:30AM at New Day Café ; 5901 Delmonico Dr. (N. of Pro Rodeo Hall of Fame)
- PPRAA Board Mtg  
Mon, January 12th  
IHOP
- PPRAA general membership meeting, Wednesday, January 14th.
- 10 Meter/2 Meter net  
Every Thursday 7:00 pm  
28.290 MHz—USB  
144.200 MHz-USB

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## Club Station Remote Operation—Testing

Jim Harris, WØEM and many club members have been working diligently with many aspects of getting the club station ready for full operation.

A couple of the biggest benefits of the proposed site at the Ellicott fire station is the access to electrical power and Internet.

Remote capabilities via Internet has been a goal of the club station from the club's earliest discussions. The Ellicott Fire Station location coupled with the research on various remote station application which Jim has been doing is allowing us (PPRAA) to see this goal within our sights.

Jim has set up one of the PPRAA radios at his QTH, added the needed hardware, and configured a new computer for remote operations use.

Jim sent the following to the PPRAA reflector December 23:

Hi to all members,

Your club has a remote HF station in testing. We currently have two individuals testing the station. We need one or two additional people for testing. Please let me know if you would like help.

You will need a computer with sound capability, speaker/headphone, microphone and internet connection.

Thank and Seasons Greetings.

Jim H., WØEM

## PPRAA Activities

During the November board meeting, the board decided to push to have more club activities. With a goal of having a radio related activity almost every month.

One such activity was December 7, Pearl Harbor day. This was a very successful special event operation. The operation took place from the proposed PPRAA station location in Ellicott.

If you have ideas for a special event operation, want to help plan and setup for a fox hunt, or other activities send an email to the board of directors. To send email to the board of direc-

tors or any member on the board following the instructions found on page 2 "Officers and Board of Directors"

At a recent CCARC (Colorado Council of Amateur Radio Clubs) meeting, Brian Milesosky N5ZGT, Rocky Mountain Division Director suggested that clubs include family related activities as well as the radio related activities. If you think this is a good or bad idea please write the board members. If you would like to include PPRAA family activities and have some ideas in mind, please include those ideas.



PPRAA special event operation.

## PPRAA Officers and Board of Directors

PPRAA Board of Directors consists of four elected officers, seven board members, as well the past president (time limit dependent). The Ø-Beat editor is a board appointed position and is also a member of the board.

Officers include:

- ⇒ President
- ⇒ Vice-President
- ⇒ Secretary
- ⇒ Treasurer

To send board member's email, browse to the officers section of our website: <http://ppraa.org/about-ppraa/officers>

President	Raleigh Holcomb	N4HYF
Vice-President	Jim Bishop	KDØKQL
Secretary	Diana Nordstrom	KCØNPP
Treasurer	Pam Scott	WØPRS
Past President	Michael Derbort	KCØELG
Board Member	Dan Martin	KDØSMP
Board Member	Glenn Brodt	N3ULW
Board Member	Jim Rader	KDØNQM
Board Member	Charlie Coyner	KD6CBC
Board Member	Jim Harris	WØEM
Board Member	Virgil Yost	NØXRS
Board Member	Frank Roger	KB3PDT
Ø-Beat Editor	Dan Scott	WØRO

## Online Resources

### PPRAA Website

<http://ppraa.org>

The PPRAA website is the cornerstone for club related information, events, and technical information.

In addition you can register, pay dues, and submit donations. Donations to the PPRAA college scholarship fund are managed by FAR Scholarship Committee

### Facebook / Google+

Follow activities as they unfold, or get reminders of upcoming events.

Links to both Facebook and Google+ social media sites can be found on the PPRAA.org.

Or from each social media site search on: Pikes Peak Radio Amateur Association

### PPRAA Forums

The PPRAA forums are intended to allow users to exchange of ideas, ask and answer amateur radio related questions, and plan/discuss upcoming events.

This is a fantastic, but underutilized, tool. Check it out and register at: [PPRAA.Forumotion.net](http://PPRAA.Forumotion.net)

## Monthly Activities

### Membership Meeting

Held the 2nd Wednesday of the month starting at 7:00.

IHOP  
5749 Stetson Hills Blvd  
(Just west of Powers Blvd)

NOTE: Many show up at 6 pm for kibitzing and grub.

### Board Meeting

NOTE: New location:

IHOP  
5749 Stetson Hills Blvd

6:30pm—8:00pm  
On the Monday preceding the membership meeting.

Board Meetings are open to all members.

### Ham Breakfast

Location changes monthly: Saturday, Jan 3rd., 8-9:30AM at New Day Café, 5901 Delmonico Drive.. This is about 3/4 mile north of Pre Rodeo Hall of Fame. Show up anytime between 8:00-9:30 AM

### 10 Meter/2 Meter Net

Every Thursday at 7pm  
Starts on 28.390 USB then transitions to 2 Meter SSB at 144.200 USB.

## Meeting Presentation Topics

### Last Meeting

Christmas Party

### January 14th

Jed Griffin: "A revolutionary demodulation to eliminate down conversions. Allowing more efficient spectrum utilization. Can enhance all RF communications everywhere, including Ham Radio."

### February 11th

PPRAA Remote Station.

To be presented by Jim Harris, WØEM.

## AmazonSmile—Shop and support PPRAA

Amazon will donate 0.5% of the price of your eligible AmazonSmile purchases to Pikes Peak Radio Amateur Association whenever you shop on AmazonSmile.

AmazonSmile is the same Amazon you know. Same products,

same prices, same service.

Support PPRAA by starting your shopping at [smile.amazon.com](https://smile.amazon.com). To shop at AmazonSmile simply go to [smile.amazon.com](https://smile.amazon.com) from the web browser on your computer or mobile device. You may also want to add a bookmark to AmazonSmile to make it even

easier to return and start your shopping at AmazonSmile.

After login, use Pikes Peak Radio Amateur Association for the non-profit to support.

## PPRAA Remote Station—Tutorial introduction

### I. Introduction

1. Welcome to the tutorial for users of the PPRAA's remote HF Station. It contains information and references to information you need to know to operate the station.

2. You are responsible to operate in accordance with your license privileges and the rules established in Part 97 by the FCC. If you do not understand your privileges and FCC rules do not attempt to operate the station. Operating this station does not grant you any additional privileges beyond those already granted by the FCC.

3. Failure to operate in accordance with the above and station procedures and rules as established herein will result in denial of operating privileges.

4. Due to equipment limitations frequencies are limited on 80,40 and 10 meters. They are

limited via software and the limitations cannot be overcome by the client (user) operator. All other HF frequencies are available.

5. The FCC requires a three (3) minute time-out timer similar to a VHF/UHF repeater. That is software controlled at the remote station. A countdown timer will display in the S-meter area of the client software.

6. Revision control is by date displayed above. There is no approval process for this tutorial. Constructive feedback will be reviewed in good faith.

7. Once installed, the client software may give you access to nearly 100 remote stations around the world including the PPRAA's remote station. Access to each remote station is granted by each remote station's administrator after reviewing your access request

and license.

8. The client software allows many individuals to listen to the receiver. This is no different from listening on any frequency from your home station.

9. Transmission is coordinated among approved and logged in users.

10. The PPRAA remote station will use a "club" feature in the remote station software to limit users to club members only. It may be opened to others at a later date.

11. The client software will allow operation using any mode other than keyed CW which may be operated with the purchase of a separate hardware key interface. CW may be sent keyboard or software as audio tones.

12. Audio (voice) and CAT commands are currently sent by the client software. Once the station is relocated after

initial testing, audio may need to be sent via Skype depending on router capabilities at the remote station location.

13. The club's Kenwood TS-450 transceiver has only about 12 CAT commands available. Thus all features on the radio cannot be remotely accessed. This is a limitation of the radio and not the client software.

14. When remote station testing is finished the licensed PPRAA membership will be provided with information to access the client software and the remote station. This is expected to be about mid-January 2015.

Jim WØEM



## PPRAA Board Meeting Minutes—8 December 2014

Call To Order- 6:35pm

Approval of the November Meeting Minutes - Pam moves as published, Jim

B seconds, board approves

### Committee reports

*Treasurer's report* - total: \$14,253.90, usable: \$8,796.46

*Club Station* - Special Event station: 9 operators, 108 QSOs, 2 antennas with 3 stations on air. Contacted Mexico, Canada, and Dominican Republic. Good contact at the Fire Department. No Club Special Event station in January.

*Antenna Report* - Still on hold pending station move, probably after holidays. Plan will be rewritten for new location.

*Building Report* - No further progress, pending information on the station move, window frames for bug control are still in progress.

*Electrical Committee* - Looking into 12V channels through the solar panels.

*Land Use Agreement* - Ed, KC0TBE, presents new LUA. The Fire Department Attorney has approved it as written, expect it to be signed at Wednesday night's meeting. Dan M. motions to accept the LUA pending approval and/or major changes by the Ellicott Fire Department, Jim R. seconds the motion, I disapprove, the motion carries.

*Megafest 2015* - Jim presents prize ideas: Grand Prize: Yaesu FT-991, Rigexpert AA-54, Yaesu FT-60R, Yaesu FT-7900R, Butternut HF6VX Antenna, List price is \$3000, negotiated down to \$2300, Jim H. motions, Dan M. seconds, board approves the purchase of these prizes. Jim R. suggests \$3000 profit goal

*Field Day Committee* - Nothing to report

*Electronic Media* - Pictures from the Special Event are on Facebook

*Asset Committee* - No changes, still missing a tube radio.

*Scholarship Fund* - No report

*Zero Beat* - Still need articles! No hate mail, so must be doing good.

### Around the Table

*Jim H.* - Remote Station: Bought a refurbished computer for \$200. Need an assistant for helping with configuration with remote client and listening on the air. Dan M. volunteers to assist.

*Mike A.* - Ideas for Special Event stations, tutoring still available: code, all three licenses.

*Diana* - Make sure the Webmaster board position issue is on the agenda for next month

*Virgil* - Should we move the poles with or without the cement? Possible agreement on removing the cement

*Michael* - Audit committee will be meeting soon for financials

*Dan S.* - Special Event station: Brian suggests family oriented events instead of just radio events.

*Pam* - Consider moving locations

### Next Board Meeting: January 12th, Location: IHOP

Adjourn - Jim H motions, Jim R. seconds. Adjourns at 8pm

### Board Meeting Minutes Addendum

#### Business conducted by email:

*Nov 27:* Jim H. motions for the club to purchase one copy of Windows 7 and one computer case with motherboard, Dan M seconds, board passes

*Dec 17:* Jim R. motions for the board to spend \$160 to renew the website hosting and domain name for 3 years. Michael D. seconds, club approves.

*Megafest 2015:* Request has been put in for July 11th.

*Club PA system:* Board has considered lending it out to other groups in the area if needed.

#### Business conducted at other locations:

*Jim B.* motions that the board meeting location be permanently changed to the IHOP on Stetson Hills, Charlie seconds, I dissenting vote, motion passes.



## PPRAA General Meeting Minutes—10 December 2014

The general meeting for December 2014 was the annual Christmas party. The kickoff to the party was a short discussion about the club station. Towards the end of the celebration we had the drawing for prizes from the monthly attendance tickets collected at the club meetings. Jim Bishop, KDØKQL and Michael Derbort, KCØELG, each won one a HE radio which include a charger stand, programming cable, and programmer software.



Raleigh Holcomb, N4HYF, our PPRAA President, wishing us all a wonderful holiday season as he directs the club into a new year.



## Pearl Harbor Special Event Station

### 2014 Anniversary Commemoration of Those Who Fell on December 7, 1941

Seven PPRAA guys showed up at the Ellicott Volunteer Fire Station the day before, on Saturday, the 6<sup>th</sup>, to erect two wire antennas and to set up the two operator stations. We had it all set up by noon and Jim H., W0EM, returned that afternoon for a couple hours with Ed to tune the radios and to go over arrangements for the next day.



We had nine club members make 108 contacts on Sunday. John deployed his radio at the base of a dual-band NVIS he set up out in the field. Of those, it's thought that Raleigh H., N4HYF, pulled in the Santa share of contacts in two pileups, one before lunch while sitting on the ground out in the field behind the fire station at John B.'s, KD0SFY, rig and one after lunch from the ops room. Lunch was sub combos, pop, and chips from the best sub shop in town.

We worked PPRAA's Elecraft K2 on 20 meters and the club's TS-450 on 15 meters. W0EM had directions, log sheets, and event fact sheets laid out to get Raleigh and me started right on time at 0900 Sunday, the 7<sup>th</sup>. All we had to do was to turn on the power supply and cite the fact sheet prepositioned at each operator location.



One little girl, the daughter of a fire fighter there, latched on to N4HYF as Santa Claus. She initially pegged KD0SFY, who was sitting at the table in front of the Christmas tree, as Santa. However, John, ever quick on his feet, or his sitter as the case may be, explained that Raleigh was Santa and that he, John, was there merely as one of Santa's helpers.



Well, that little girl went right up to Raleigh at his operating station and pegged him as her Santa, and Raleigh's heart was just too big to disappoint the little darling. Her mother reported to Ed the next day that her little ankle-biter was bouncing off the walls with excitement all night, hardly slept a wink, and was telling everyone at the fire station Monday morning that she had spent the whole day Sunday with her Santa, right there in the fire station.



It is always great to see new faces at PPRAA events. It was a real treat to see a new family there to help us make some of those contacts. Here is George and his daughter Virginia sorting through a pileup. Although this was George's first HF CQ CQ session, his daughter had no difficulty at all helping keep the records straight.

Article and photos by Dan M., KD0SMP

## ARRL Kids Day

The ARRL have Kids Day event twice a year. In 2015, Kids Days are to be held January 4th and June 21st.

Kids Day always runs from 1800 UTC through 2359 UTC. It might be fun for the kids to convert the time. In Colorado you can just tell them to drop by after Lunch (11:59AM) and that it is over at 5 PM.

As always, you never know how the kids will react. You might have the quiet kid not wanting to give up the microphone or keyboard, or the most outgoing just shaking their head “no”. You can operate as much or as little or as much as you like.

If you do not have any kids around that should not stop you from getting on the air.

Just to get you and the kids (that may be at your station) ready for a QSO have them and you

ready for the important questions or to volunteer the information. Some for the favorite topics include:

- Age
- Favorite Color
- Location (QTH)
- Weather (like cold, snowing, sunny)

Be prepared for questions related to you station, like how tall is your tower? Why did you get involved with Amateur Radio? How “far” have you talked? Have you helped anyone at sea? What was it like before dirt (just checking if you are reading this)? You will find Kids Day operation on all the bands including the WARC band.

The suggested frequencies are:

- 10M 28.350 to 28.400
- 12M 24.960 to 24.980
- 15M 21.360 to 21.400
- 17M 18.140 to 18.145
- 20M 14.270 to 14.300
- 40M 7.270 to 7.290
- 80M 3.740 to 2.940

As always with allowing non-licensed people on the air (i.e. 3rd parties) please observe third-party restrictions when making DX QSOs.

You might want to utilize the local repeaters or you favorite simplex frequency. If you plan to use a repeater for these types of activities it is always good to check with the repeater owner.

All participants are encouraged to post their story and photos to the [Kids Day Soapbox](http://www.arrl.org/soapbox) page ([www.arrl.org/soapbox](http://www.arrl.org/soapbox)). Tell the world about your fun!

## ARRL—Resources a mouse click away

Whether you are newly licensed or a seasoned operator the ARRL web site holds a wealth of information.

For new operators I suggest starting at the on-the-air section and the sub-section “Get on the air”. [www.arrl.org/get-on-the-air](http://www.arrl.org/get-on-the-air)

The section is titled “New Hams” and has information such as the frequency allocation and band charts, contact basics chart, Q signals and prosigns, communication procedures, RST system, and more.

You might find the Ham Radio Glossary found in this section very handy as well.

Also, are you transition from FM repeater and simplex to non-

local modes and frequencies? If so you will find that knowing your grid square will be handy. This can be determined using the Grid Square Locator found here.

Other new ham items you will find include Operating Ethics, and Safety, Both of which are extremely important.

How about if you are looking into purchasing your first radio, antenna, or getting started with you first contact.

If you want to find out a bit more about logging your contacts, determining if you want log on paper or PC and many aspects of logging, simply follow the appropriate link.

Included here you will find some basic information on contesting, as well as find out about other modes of operation such as Morse Code and various Digital Modes.

The site has a wealth of information available to you and this article is about just one of the many subsection within the On The Air section.

Check out the ARRL site at:

[www.arrl.org](http://www.arrl.org)

By: Dan, WØRO



# FEMA ICS CLASS 100 & 200

**Come One! Come All!**

**FEMA Incident Command Structure Class for 100 & 200  
Colorado Springs**

If you are in ARES this is two of the required courses needed for ARES Command Personnel. This class will be taught on January 24th from 9am to 12noon at St. Francis Medical Center.

The class size is limited to 30 participants. Register BEFORE January 19th, 2015 to secure your place.

To register go to [www.mereowx.org/colorado-springs-classes](http://www.mereowx.org/colorado-springs-classes), talk with one of MERO's staff, or call our number at the bottom of this flyer.

We look forward to your participation.

Date: Saturday, January 24th, 2015  
Time: 9am to 12 noon  
Location: 6001 E Woodman Road, Colorado Springs  
Cost: Free (Donations accepted at classroom)

[www.mereowx.org](http://www.mereowx.org)

(719) 445—9521

[contactus@mereowx.org](mailto:contactus@mereowx.org)



## How do we promote better operating practices?

How do we promote better operating practices? A lament that I often hear is that many amateur radio operators either don't seem to understand the importance of good operating practices or just don't care about them. Just this morning, a reader sent me an e-mail saying, "I think there are too many hams out there that don't how to call a station on split frequency. It's amazing that we have so many dummies out there."

I wrote back, saying, "Maybe we need another type of Official Observer, called the Operating Observer. This group would note when operators aren't following good operating procedures and send people gentle reminders." Of course, as soon as I hit Send, I knew this wasn't a very good idea. As my reader noted, this would be a thankless job, and chances are the poor operators would simply ignore the notices, anyway.

Even so, there must be some way to encourage good operating procedures. One effort to promote better operating procedures is the DX Code of Conduct (<http://www.dx-code.org/>). This is a list of 13 suggestions to make DX operation, particularly pileups, less chaotic. The website includes a small image that you're supposed to post to your website to show that you support the Code. While this is certainly a step in the right direction, I wish there was something that we could do to be more proactive in improving operating practices.

There is, of course, the ARRL Operating Manual. This publication is now in its tenth edition and is a valuable source of information about how to operate properly. The problem is only a fraction of the amateur radio operators on the air have a

copy, much less read it.

Another attempt at promoting good operating practice is the ARRL's A-I Operator's Club (<http://www.arrl.org/a-i-op>). While a noble effort, I think that this program really requires more promotion. In addition to being more aggressive about finding A-I operators and bringing them into this "club," the ARRL should use it to promote better operation. Perhaps a series of videos with the A-I Ops logo showing how to operate split or how to properly call CQ would help improve operating practices overall.

Talking about videos, I'd be surprised if there weren't already some YouTube videos that illustrate good operating practices. If you know of any, please e-mail me. It would be great to have a list of really good ones that I can send to people who want information on how to operate better. What do you think? Do we need to be more proactive about encouraging hams to use good operating practices? If so, how do we go about it? What do you do to encourage better operating practices?

*When not worrying about the state of amateur radio operating practices, you'll find KB6NU working on updates to his "No Nonsense" study guides, teaching one-day Tech classes, or blogging about amateur radio at [www.kb6nu.com](http://www.kb6nu.com).*

## January Contest Corner

The follow is a select list from <http://www.hornucopia.com/>.

There are many more contests available on the site. I find the 8-day contest calendar useful. Thirty minutes, an hour or the full contest time is a great way to perfect a new operating mode, digital setup, or completely loose yourself if it becomes addicting.

Links to rules, where to submit logs, and other contest specific information can be found on this site.

Selected contests from 8-Day Calendar that can be found at:

<http://www.hornucopia.com/contestcal/contestcal.html>

Date	Contest	Time
Jan-1	NRAU 10m Activity (CW)	See link above for times
Jan-3 & 4	ARRL RTTY Roundup	1800Zrd)-2400Z(4th)
Jan-4	Kids Day	1800Z-2359Z
Jan-10 & 11	North American QSO Party (CW)	1800Z(10th)-2359Z(11th)
Jan-23-25	CQ 160-Meter, CW	2200Z(23rd)-2159Z(25th)
Jan-24	ARRL January VHF	1900Z(24th)-0359Z(26th)



## VE Testing Colorado Springs (PPRAA)

Pikes Peak Radio Amateur Association (PPRAA)

When:  
Feb, Apr, Jun, Aug, Oct, Dec  
2nd Saturday at 9 AM

Location:  
Colorado Technical University (CTU)  
4435 North Chestnut  
Colorado Springs, CO 80907

Directions:  
<http://ppraa.org/ve-testing>  
or contact:  
Dan Martin  
[VE@PPRAA.org](mailto:VE@PPRAA.org)



## VE Testing Woodland Park (MARC)

MOUNTAIN AMATEUR RADIO CLUB (MARC)

When:  
Jan, Mar, May, Jul, Sep, Nov  
1st Saturday at 10 AM

Location:  
Woodland Park  
Woodland Park Library-  
Community Meeting RM  
218 East Midland Avenue

Directions:  
<http://www.nx0g.org/ve.html>  
or contact  
Wes Wilson (KØHBZ)  
[k0hbz@arri.net](mailto:k0hbz@arri.net)  
Call (719) 687-8758



## Applicants will need the following items:

1. A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).
2. Your FRN or SOCIAL SECURITY NUMBER (now required – this includes children).
3. Your CURRENT ORIGINAL amateur radio license (if any) and a PHOTOCOPY for the VE Team to keep.
4. The CURRENT ORIGINAL CSEs you have and a PHOTOCOPY for the VE Team to keep.
5. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be made out to ARRL. This covers all exams you wish to take at this VE session.

NOTE: PPRAA and MARC VE Team policy, as with many VE

Teams, is to not allow same day retests on failed exams.

### PPRAA – Colorado Springs testing only:

Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association

## Isotron Antennas -35Th Year Anniversary – January 2015

Get ready for the fall/winter season. The easiest way to operate 80M low noise reception and full transmitting efficiency

[www.isotronantennas.com](http://www.isotronantennas.com)

The best way to operate HF easy, easy installation, excellent performance, durable construction and CC&R friendly (XLY too)

This mode became common in the late 1950's, early 60's. On your radio, you have Upper Side Band and Lower Side Band.

Remember, an Amplitude Modulated (AM) signal has 3 parts to it. It has the carrier. A steady radio frequency (example 7.200 Mhz).

Then, the sum of the audio to the carrier or Upper Side Band. Also, the difference of the audio to the carrier or Lower Side Band. Single Side Band is using only the Upper (USB) or Lower (LSB) side band. That means the carrier and one of the side bands is removed. There are no Side Bands generated if there is no audio or voice mixed in with the carrier.

By removing the carrier, there is no RF signal. However, if you add audio you get an RF signal plus or minus the carrier frequency, depending on which side band you select, LSB or USB. If there is no audio, there is no signal. This is accomplished by a circuit called a "Balanced Modulator". This will produce both side bands, but no carrier. Then there is a filter to select the side band desired.

You can not receive this signal the same as you would AM. It is a radio frequency that is changing to correspond to the audio. To hear it intelligibly, the carrier needs to be applied or mixed with the signal. This is supplied by the receiver. It will zero beat the signal and will leave the audio to hear.

This is why you can change the pitch of the audio to sound high like a mouse or deep like a real man.

The zero beat for USB is a little different than for LSB. This is because the USB is the sum of the carrier and audio, LSB is the difference.

LSB is interesting because when

you raise the pitch of the audio, the signal lowers in frequency and vice versa. This mode has been used as a simple encryption device.

From this you can see that trying to get an SWR measurement on SSB is not practical since there is no signal until you put some audio to it.

This description is very basic. The circuitry is a little involved and none of us need to think that hard right now. Next article we will see what we can make up about FM.

73,

Ralph WD0EJA

Dec 2014

If you have questions about the product or articles feel free to contact me.

### **BILAL COMPANY**

137 MANCHESTER DR.

FLORISSANT, CO. 80816

PH/FX: 719/687-0650

[wd0eja@isotronantennas.com](mailto:wd0eja@isotronantennas.com)



**PIKES PEAK RADIO  
AMATEUR  
ASSOCIATION**

Send membership application to:

Pikes Peak Radio Amateur  
Association, Inc.  
P.O. Box 16521  
Colorado Springs, CO 80935

**General Questions:**  
ppraa@ppraa.org

**ØBeat:**  
zerobeat@ppraa.org



**ppraa.org**

**Get Radio Active, get on the air!**

## Membership Application:

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ New Membership: Yes / No

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Call: \_\_\_\_\_ Class: \_\_\_\_ Phone # (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Are you a ARRL member: Yes / No

Additional Family Members:

Name1: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

Name2: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

Name3: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

\_\_\_\_ \$15.00 Full Member

\_\_\_\_ \$10.00 Full Member over 65

\_\_\_\_ \$18.00 Family Membership

\_\_\_\_ \$12.00 Family Membership over 65

\$\_\_\_\_ Membership Amount

\$\_\_\_\_ Scholarship Fund Donation

\$\_\_\_\_ PPRAA General Fund Donation

\$\_\_\_\_ Total

## 2015 Scholarship Fund

There are multiple ways to donate to the PPRAA Scholarship Fund.

1. Use the form found on this page and send it, along with a check to PPRAA.
2. On the PPRAA web site you can donate via PayPal
3. At club meetings
4. Directly to the our scholarship fund.

Make checks to:  
PPRAA Scholarship

The scholarship fund can be reached at:

FAR Scholarship Committee  
P.O. Box 911  
Columbia, MD 21044

## Ø- Beat Banner

Photo by Dan—WØRO

The Ø-Beat banner picture was taken of Pikes Peak by Pam, WØPRS, November 24, 2014.

The theme of the banner is Pikes Peak. If you would like to submit pictures for the Ø-Beat banner, please send them to:  
zerobeat@ppraa.org

Please Include "[Ø-beat]" as part of the subject line.